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A MUSCULAR HYPOCHONDRIAC.

WELL-MEANING moralists, and young curates, and, in fact, all persons addicted to the abuse of metaphorical language, are a little hard on feminine beauty. They can never touch on the vanity, brevity, and superficiality of things in general without pointing their dull platitudes by the most unfair allusions and comparisons to the fair sex. No doubt the perfect bloom of 'all those endearing young charms' is soon impaired; but beauty is not the only thing which culminates to decline. Other charms than those of beauty have a scarcely less ephemeral duration. The charms of muscle, for instance, the glory of the calf—

That play of lungs inspiring, and again
Respiring freely the fresh air, that makes
Swift pace or steep ascent no toil—

all these are things which endure in their glory and perfection but for a season—a base sea-side season. Why, then, can we not have a little variety in our teacher's parables? Why not leave the epidermis of the fair, and have an occasional tilt at the muscle of the strong? Granted that our dear enslavers may be none the worse for an occasional reminder that their empire is limited—in time, for it is fleeting; and in space, for it is but skin deep. But, O Hercules! do not our 'barbarised athletes' need a word in season too? Possibly, the ballroom belle sets too high a value on her charms, and is too deeply cast down by their decline; but not her emotions, when she feels she is a budding 'wall-flower'—not the depression of the gentleman in Wordsworth, 'who daily travels further from the east'—not the forlorn misery of the love-sick Guppy, can approach the pathetic desolation of the athlete who feels that he is increasing in the *wrong* place. To feel that the days are at hand in which he shall no more emulate the baboon on the trapeze, or the flea on the vaulting bar; that he must soon abjure the rectangular delights of standing at ninety degrees to a chair; that he can no more hang on to a bar by his toes or the back of his neck; that, in

short, he must soon abandon the high pedestal from which he has hitherto contemned his less fortunate, because flabbier fellow-creatures, is to feel reduced to the level of a retired pugilist, whose example he may almost as well follow, and open a public-house. Henceforth, nothing can effectually assuage the melancholy of the ex-gliadiator; but such transient gleams of sunshine as gild his blighted life are when he is judge or starter at some athletic meeting; but even then he feels that he is only a sort of male chaperon, and the reflection is full of bitterness.

I do not thus borrow the language of the Preacher, because I have felt in my own case how bitter it is to retire into private life. Personally, I am not muscular, nor ever was. I have always been able to pass a fifty-six pound weight without the slightest desire to push it up from the shoulder; I have always been perfectly continent in the matter of dumb-bells and Indian clubs. To scull from the barges to Sandford, with an occasional fantasia in a scratch four, was the extent of my powers and the summit of my ambition. I was rather thinking of—or at—my old college chum, Joe Rullock, with whom I was spending a few days a short time since. In our old Oxford days, Joe was to me a sort of self-appointed committee or keeper, considering it his mission to interpose his brawny person between me and all sorts of imaginary dangers; and so, in course of time, I came to play an academic Phil Squod to his Captain George; I used to steer him to Ifley, to measure his throws with the hammer, or take his times when he ran at the Marston ground. In short, he loved me because he looked on me as so helpless and feeble—though I am not really feebler than Dr Beddoe's average man—and I loved him that he did pity me. I did indeed sometimes endeavour to protest against his mild and benevolent despotism, but he always calmly waived me off with: 'Pooh, my dear fellow; leave it to me; you know you are not strong.' What made my tame acquiescence in this bondage the more ridiculous was, that I was Joe's senior in years and standing. It was therefore but natural

that, when I put on my gown, I should leave my protector behind me. But this natural course of events annoyed him greatly, and caused him as keen a pang as a hen who rears a duck feels when her protégée takes to the water. But I went my way, and left Joe in a halo of cricket, and long throws, and tremendous puts, living a life of incredible hardship on raw meat, but perfectly recompensed by his inches round the chest, and his generally lumpy and tuberos condition, and the unanimous commendations of the sporting press.

Ten years elapse between the prologue and the next act. I had been serving my country in India, and Joe had retired to his comfortable patrimony, where he settled down into a model squire. From time to time reports reached me, through *Bell's Life*, of his prowess in cricket, and occasionally he favoured me with a letter. But after a while, without any diminution of kindly feeling, our correspondence fell through, and the notices of my friend in the oracle became rarer and rarer. At the end of ten years, I came home on leave for twelve months, and I lost no time in getting to Ashlins, where Joe gave me the warmest of welcomes. He had developed into a magnificent specimen of an Anglo-Saxon, deep in the chest, broad in the shoulders, firmly set on long, massive thighs, with a full yellow beard rippling over his honest, serious, sun-browned face. His figure, perhaps, was verging on the portly; but, as yet, he was safe from any curter epithet than portly. He wrung my hand with his old remorseless gripe, and patted me on the back with the old Oxford air of protection, so that I felt at home immediately on the old footing of the feeble dependant. I observed, too, at luncheon, that my friend's old prowess with the knife and fork still clung by him. Huge slices of beef crumbled beneath his molars like corn in a mill; and quart pewters, the trophies of his legs and arms, streamed with bright ale. Afterwards, he smoked his venerable meerschaum, with that deliberate and grave enjoyment of which none but physically powerful men are capable. Luncheon over, a walk to the covers was proposed, and we were soon immersed in that discursive chat, dear to long-parted chums. Unfortunately for our quiet enjoyment, a five-barred gate threw its malignant shadow across our path. I need scarcely say that I had no more imagination apropos of a five-barred gate than Peter Bell of a yellow primrose. And I have my private opinion that Joe also had, by this time, got into a way, when alone, of walking through gates, when possible, rather than vaulting over them. On the present occasion, however, the association of ideas, I suppose, was too strong for him, for he put his hand carelessly on the gate and—struck his knee heavily against the top bar.

'Foot slipped,' explained Joe; and again he went at the gate, with the same result as before. A shade of annoyance crossed his face, as if it were a humiliation to have to take a run at such a mere bagatelle as five feet six. He felt, however, that he had gone too far to recede with honour; so he took a run, and again succeeded in heavily banging his knee. The saddening conviction now began to dawn on poor Joe's mind that he could not get over the gate at all. The truth was horrible, but irresistible, and the moan of the fallen athlete was as touching as Wolsey's lament to Cromwell. 'Oh, hang it, Tom,' he said with a mournful shake of

the head, 'this is too sickening! This is the approach of the sere and yellow with a vengeance. I give you my word, I once got over six foot seven at Mac's. And now I have to sneak over five foot six like a girl in petticoats! No offence meant to you, you know, because you never were strong. But to slip through one's six ages into the slipped pantaloons by thirty-five! But it's all those confounded gymnastics.'

'Confounded gymnastics;' and from those lips! I could not believe my ears. No. The pope might deny his own infallibility, and Bass might advocate a Maine Liquor Law, but Joe Rullock, the mighty gymnasiarch, the hero of a hundred 'grinds,'* the unwearied haunter of the palaestra, could never give the lie to his whole past life, and deny his own gymnastics.

'Come, Joe,' I said soothingly, 'you're riled, old fellow. You must be chaffing about the gymnastics.'

'I tell you,' he repeated with solemn emphasis, 'it's those cursed gymnastics. They bring you into an unnatural state of training and muscular development; and the consequence is that you break down twice as early as other men. Look at me: at five-and-twenty I was a sort of Milo; at five-and-thirty I am a wreck.'

It was no use trying to argue Joe out of his position; besides, I had no wind to spare for talk, as it was all I could do to keep up with this poor wreck, striding along at five miles an hour. But, not being a wreck myself, I soon began to exhibit symptoms of distress at this rapid pace, whereon Joe graciously proposed that we should sit on a gate and chat. Being anxious to divert him, if possible, from the unhappy train of reflections in which he was evidently indulging, I started a hobby that I hoped he would deign to ride. 'Made any long scores lately, Joe?' I inquired.

'What at?' snapped Joe.

'Why, cricket, of course.'

'Cricket! Do you think a man can make a score with a pot like mine? No, sir; I'm too fleshy for that sort of fun; too fat, sir. Do you know that I weigh fourteen stone seven? And what have I to thank for it?—Those infernal gymnastics. They put on great lumps of muscle at high pressure, which, directly you return to a natural, normal life, turn to fat.'

I tried to assure the poor fellow that his case, as yet, was by no means desperate—that he was far from a Banting; but he would not be comforted.

'I tell you, I ought to know best, Tom. It has been coming upon me some time now. I had long had some uneasy suspicions on the subject, but I was brought up sharp about two years ago. I was taking a team to play the opening match of the season with the Stalkshire Hedgehogs. Well, sir, when I came to put on my bags, I found I had precious hard work to draw them on; my thighs seemed to be in tights, and the buttons altogether refused to meet. At first, I thought they had shrunk in the wash, or possibly I had got a pair of my brother's by mistake. But, when I tried another pair, I found it was still the same; and then I realised the stern fact, that I was growing a pot. Since then, I have seldom played except with our own fellows; and I shall give it up altogether next season.'

* 'Grinds,' college slang for athletic sports.

This failure of my best meant efforts dismayed me excessively, for I saw that I had to deal with a perfect hypochondriac on the subject of muscular atrophy. He persisted in regarding himself as a shattered athlete, and was perpetually 'facing the infernal facts,' as he phrased it. The slightest thing set him off; he would go off on the very faintest scent. For instance, when his eldest boy, as fine a lad of eight years' old as ever a man called son, was brought in after dinner, I stumbled on the unlucky remark, that 'he was a perfect little athlete.' Joe was down on me like a knife.

'Don't talk like a fool, Tom. Do you want to vitiate the poor little fellow's mind already? I once caught that boy playing with a dumb-bell, and I gave him a good kicking for it. And if ever,' he continued, sternly fixing the boy with his eye, 'I catch Joe on the bars, or playing the tomfool in any such way, I'll skin him! Remember that, Joe; for I mean it. Gymnastics have caused your poor father misery enough, without wrecking the happiness of his son. I am no heathen, to sacrifice to Moloch.'

'Come, Joe,' I said, 'you seem uncommonly bitter against your old love. But be a trifle more explicit; let us hear the whole of your impeachment of gymnastics. You seem to me to be as violent now in your denunciations of them, as you were formerly unreasonable in your devotion to them. Come, now, what harm have they done you?'

'Well, in the first place,' grunted Joe, 'they have broken my wind.'—I thought of the five miles an hour, but was silent.—'At the slightest exertion or quickening of the pace, I begin to blow like a grampus. I tried to get up Mont Blanc last year; had to give it up at the Grands Mulets. If I go in for swimming, I knock up after half a mile.'

'Well, but even if this is so, how is it due to gymnastics?'

'I'll tell you. In the first place, as I said before, they put on muscle that with the least inaction becomes fat. But besides this, only consider what fooleries we go in for when we are at it! We get into a perfect lather of perspiration; we immediately shove our heads into a basin of cold water, or get some fool like ourselves to pour a can of cold water down our backs. Of course, the perspiration is violently arrested, and the system chilled. The result is that we thicken the bronchial tubes, we derange the action of the heart, we become asthmatic, and extremely susceptible of cold.'

'Well, I admit the first count, old man. You are, comparatively—very comparatively—speaking, broken-winded. What next?'

'Well, in the next place, you never yet knew a fellow go in heavily for athletics who did not damage himself by overstraining some part or other. You knew Dupuids of Balliol—magnificent fellow! seen him throw the hammer one hundred and twelve feet—well, he strained his left breast, and feels it ever since. Long, the mile-runner, brought on varex, and wears an elastic stocking; Doolan, the spurt-runner, went into a consumption; my cousin Jack, who won the sculls, has to wear a truss. I sprained the right pectoral muscle when I was playing some stupid antics on the trapeze, and directly the cold weather sets in, I am never free from pain in the damaged part.'

'Proven,' I exclaimed, anxious to check his reminiscences of disabled heroes, which threatened to become lengthy. 'You have made good your second count. You are damaged, in point of fact a screw—a broken-winded screw. What next?'

'Besides all this,' continued he, 'I am quite convinced that strong training makes a man heavy, somnolent, and stupid. Plato, who, to my mind, is about the only fellow who ever understood the subject of education as a system founded on reason, is quite right in saying that physical and mental training cannot go on simultaneously. Mark Pattison, too, is tolerably well on the spot in what he says about the mania for athletics. Only, you know, he is a weakling like you, and a man does not like to be put right by a fellow that he could smash.'

'Well, but the Greeks,' I objected, 'certainly made gymnastics an integral part of their education.'

'True,' replied Joe; 'but, in the first place, the Greeks began their physical education at a time when the mind is best fallow, and brought it to an end in good time. Whereas our fellows grind on the river, or in the gymnasium, at the very crisis of the mind: they burn the candle at both ends. Besides, the gymnastics of the Greeks went on an entirely different principle from ours. Theirs were systematic, and, so to speak, generic; ours are haphazard and special. They cultivated the harmony of the whole body, we only develop particular parts; our fellows only aim at putting on lumps here and there. One fellow goes in for rowing, and puts a lump on his forearm, and another behind his shoulder-blades. Another fellow goes in for dumb-bells and parallel bars, and puts a lump on his biceps. Another goes in for running or jumping, and puts a lump on his calf. But there is nothing systematic; it is all chaotic and idiotic.'

'Well, I suppose you must have it your own way,' I said: 'I will "write you down an ass," if you like. Let me see: that makes a broken-winded asinine screw. Anything else?'

'Yes; there are the moral annoyances and vexations of finding out that you are perpetually losing the faculty of doing some absurd thing or other, that no one in his senses feels the least desire to do. You saw to-day how I lost my temper because I could not vault over a five-barred gate. It was the same thing the other day at an athletic festival at Westwich. I was fool enough to let them humbug me into going in for the hammer—"just to shew the rustics how to throw it." Well, sir, one of my own tenants' sons threw six feet further than I did.—But come; we've had enough of this; pass the port. A few pounds of flesh more or less can't make much difference now.—No more? Then let us go, and have coffee with Annie.'

'Just another minute,' I pleaded. 'At this rate, we ought not to take any exercise at all.'

'I never said that. Take exercise in plenty—cricket, row, ride, shoot, skate, fence, box, so long as you can do so without leading an unnatural life. But if any one wants you to go into training for any of these things, to knock off your pipe, to limit yourself to some absurd pittance of fluid per diem, with your throat as dry as the Sahara, to variegate your skin with a crop of boils, or to live at the mercy of some brutal trainer or some pigmy cox, take my advice, and do nothing of the sort. It is

better to remain an abortion like you, Tom, than to break down like me. But come up-stairs, and then we'll have a pipe.'

A GOLDEN SORROW.

CHAPTER XXV.—'WHERE IS WALTER?'

WITH the certainty that under any circumstances his life could not be much prolonged, it might have been supposed that some soft, regretful feeling would have come to Reginald Clint. He might have been less morose and cynical, less obstinate in his conviction, that in the long-standing quarrel between himself and his fellows, he only was in the right, they absolutely and wilfully in the wrong. But, if any observer had indulged such an expectation, it would have arisen from an imperfect conception of the man's character. We are too apt to regard sickness and sorrow as direct agents for good in themselves, whereas they never absolutely turn aside the ordinary current of one's moral life; they are what the person who experiences them makes them. Reginald Clint believed what Mr Martin had told him; indeed, there was a warning voice within him heard, but, in the sense of warning, unheeded, which affirmed the truth of the doctor's words. Nobody but himself could tell how difficult he—who, until a comparatively late period, had been a strong man—sometimes found it to live; how easy it would have seemed to him to relinquish the effort, and allow that deadly nausea, that terrible tremulousness, that overwhelming weakness to have their full way. And they wanted him to give up drink; to give up the only thing that checked all these, and pulled him back from the abyss he so constantly neared! He was not such a fool as not to know that it was also the origin of the deadly evil which he felt within his frame, but it was too late now; he did not deceive himself; he knew it would always have been too late, at least ever since the time when, if an intrusive vision of his wife's pale face, as he remembered it in her welcome coffin, and his wife's rosy face, as he could not forget it, on her wedding-day, arose before him, he got rid of them both by the agency of drink. He would keep off the big bouts which shook his nerves, and inflicted those dreadful attacks of fear upon him, but he would do no more; and he was not afraid of death. There might be another life, perhaps; he did not know or care much about that; Reginald Clint had not in him even 'the beginning of wisdom;' at all events, he was getting tired of this present world. People died very easily sometimes, with the aid of drink, and he did not like pain. He had had a good deal of it already, more than any one knew about; he wanted to have as little more as possible, and as to avoiding it by giving up drink, he knew better! At all events—and he came steadily back to this in his thoughts—he would not, and he could not.

He did not. Within three weeks after the making of his will, Reginald Clint had brought himself to a state which, if he had deferred that proceeding, would, in all probability, have invalidated it. His temper, so far from being softened, was more than ever intolerable, and his tyranny such that there was great difficulty in keeping the domestic staff together. Florence bore the brunt of much of this, putting herself as far as possible between him and those whom he had habitually maltreated with his

tongue, though never so grossly as now. Her task was a hard one, full of most repulsive duties, for disease spared nothing to the dying drunkard, and there was no one to share them with her. In after-days she wondered how she was sustained in courage and in bodily strength throughout that time, with its ever-present horror and its agonising suspense.

Miriam was informed of her father's state, but Florence found herself obliged to add that Mr Clint would not receive her unless she came to the Firs alone. He positively refused to admit Mr St Quentin into the house. This was a novel development of his extraordinary temper, and Mr Martin and Florence were equally at a loss to account for it. But they presently discovered that he had, by dint of long brooding over the matter, conceived a violent animosity against Mr St Quentin, in consequence of his victory over him respecting the conditions of his marriage with Miriam. He had been beaten on the point of the settlement; and his morose, ill-conditioned mind, beginning now to be touched with positive disease, ever seeking nutrition for its spleen and ill-will, had fastened on this fact with peculiar avidity. Miriam might come if she chose, but not the plausible old cheat she had married, and would find out some day. She had been in such a hurry to get away from her father, that she had allowed herself to be fooled; let her take care she was not left in the lurch altogether. They could not extract from him any expression of a desire to see his daughter; beyond 'she may come if she chooses,' he would not go.

Miriam would have gone to the Firs gladly, even on such slender encouragement as this; but she was destined to feel, in this instance, the full weight of the yoke under which she had heedlessly and credulously placed herself. If her father was obdurate, so was her husband, and he had a threat to use which was potent. 'You go nowhere without me. If you leave my house, without my permission, on any pretext whatsoever, you need never return to it. Let there be no further discussion of the subject.' Miriam had ascertained that this was no vain threat, no imposition in the true spirit of a petty tyrant, on her credulity, but that he had the power to carry it out. So she submitted, and hardened her heart against the man who thus treated her—well-nigh driving him mad by her carefully displayed contempt. She wrote to Florence full particulars of the battle, and, acknowledging Mr St Quentin's victory, declared her intention of rendering it more costly to him than any number of defeats. Florence in reply entreated her to write no more in that strain; she felt she could not bear it, in the deep gloom of the terrible episode through which she was passing. Miriam hardly understood Florence's feelings, but she respected them, and for some weeks their correspondence was almost limited to the despatch of bulletins on the one side, and the acknowledgment of them on the other.

Reginald Clint asked no questions about his daughter. Whether he thought of her with affection and regret, or with bitterness and resentment, no one could tell. He was generally taciturn, even with Florence, but, at the worst stages of his illness, he was pleased when she was with him, and uneasy in her absence.

The night had come, cool, calm, and silent, after a day of much suffering to the dying man, and of

incessant fatigue to Florence. Mr Martin had left the house shortly before, and Florence's watch was soon to be relieved for a few hours by a hired nurse, who had now been in attendance for some days. Mr Clint had been asleep for a little while, and Florence, who was sitting by his bed, had allowed her weary lids to close for a few moments. When she opened her eyes she found that the sick man had turned, and was gazing at her intently. A change in his face caught her attention immediately.

'Do you want anything, sir?' She approached him as she spoke, expecting the usual craving demand for stimulant, which it had long been useless and impossible to resist. But no such demand was made, nor did the dim, sunken eyes turn eagerly, as they had always hitherto turned on waking, towards the spot where the bottles were kept. He still looked at her, but did not reply. She held back the curtain, and inspected him more narrowly. The change struck her still more forcibly, but it was not a painful alteration; it consisted rather in general unlikeliness to the face she was accustomed to see, than in any threatening symptom.

'Where is Walter?'

He spoke the words slowly and distinctly, his eyes still fixed on her face. No answer. Florence never knew whether her body started, or in any way betrayed emotion, but she felt as if she had been shot.

'Where is Walter?'

She gently knelt down beside the bed, and answered him in a soothing tone, with all her terror: 'Don't you remember, sir? Mr Walter is in California.'

'I forgot.'

He closed his eyes, and dozed for awhile—how blue and sunken his face was, how irregular his breathing!—and she knelt perfectly motionless beside him. It was the first time she had heard his father pronounce her husband's name. Presently he roused himself, and sighed heavily.

'Are you in pain, sir? Can I give you anything?'

'No; I am in no pain—but my head is heavy. I thought Walter was here. I suppose I was dreaming.' He spoke very slowly, and with gaps between the words. Then, after another pause, he went on: 'I must have been dreaming that Walter was here, and there was something he wanted to tell me. I have not seen him for a long time.'

'So I have heard,' Florence ventured to say.

'I thought he would have come back sooner, but I suppose he is doing no good out there.'

'I have been told that your son is doing well, sir, and that he hopes to return very soon, and prove to you that he has profited by his experience.'

'Ah!'—in a vague manner—'it will be too late soon.' He drew his breath heavily, and his chest laboured. Florence rose, gave him some wine, which he drank without eagerness, and then quietly resumed her former attitude. 'Walter and Miriam,' he said, 'Walter and Miriam.'

'Should you be glad if they were here, sir? Do you wish to see your daughter? Do you want her?'

'No!' but there was no fierceness in his tone, no scornful repudiation of feeling; 'I don't want her—I don't want any one but *you*.'

No words came to Florence.

'I have not been so blind and insensible as you

may have thought me. I know very well what you have been to me. I might have died like a dog in a ditch if it had not been for you, and I don't want any one else now.'

'O sir, don't say that! If only for my sake, don't say that!' Florence had found words now, and was holding his passive hand in both hers, while still the ghastly eyes gazed into her face. 'If I have been of any service, of any comfort to you, I ask for only one acknowledgment, for only one reward. Let me tell your children that you have thought of them with affection, that whatever the cloud was which came between you and them so long ago, it has quite cleared away. Let me tell them this—to the daughter who will come to you at once, and to the son who will not be long in coming. I hope, I pray, I believe he is on his way already. But whether he comes soon, or not until he cannot hear it from your own lips, let him know that he is forgiven. Whatever his faults towards you were, he has deeply, bitterly repented of them; he would give all the world can ever bring him to undo them, or to know that they no longer dwell in your memory.'

Unheeded, unconscious tears were streaming from Florence's eyes, and falling on her hands, and on that one which she held.

'Think of his long banishment from home, of his kind and loving heart—I do not think you ever knew him rightly—and spare him the anguish of knowing that you had left him unreconciled to him, that there was bitterness in your heart. I pray that you may be left with us until he comes home; but, lest it may not be so, say some words of comfort for him to me. Do say them—ever so few—here, now, to me!'

Her earnestness hurried her away from all caution and restraint, and yet she did not lose sight of her patient's state; her voice was not raised, and she knelt quite still.

'I dared not mention his name,' she went on, 'though I have so longed to speak it to you, all these months; but now, now that you have spoken it to me yourself, I do no wrong. Give me a message of reconciliation to your son.'

'Give *you* the message? What do you know about my son? Why are *you* pleading his cause?'

Florence took a desperate resolution. She had not any doubt that Mr Clint was dying. His son should not carry through life the burden she had found well nigh intolerable for a few years. She resolved to tell him the truth.

'Sir,' she said, 'you have to forgive him many things, but one thing above all, and it is because of that great fault, that great sin against you, that I am pleading to you now. Only for that, I should not be here, and Walter would be beside you. I entreat you to pardon him, and me too, for I am Walter's wife!'

'Walter's wife? You!'

There was surprise in the feeble voice, but not anger. There was something like awe, but not scorn.

'Yes, I—I, the girl you were told about—I, Florence Reeve.'

She laid her head upon her hands, still folding his, which he did not withdraw, within them; and there was no sound but her low sobs for some minutes. It was all over now; she had done the worst or the best she could, which circumstances must decide; but, whatever that decision might

be, she was even then, at that supreme moment, conscious of a sense of relief. Her head was full of whirling thoughts, and her heart was beating fast with fear and anguish, but the burden both had carried so long was gone. No matter what else might happen, her husband's father could not now die wilfully deceived by his only son.

'Married to you! And you here like a servant!' He spoke low and faintly, but she caught the sounds. 'Tell me all about it. Don't be afraid.'

Then she told him, without moving from her kneeling attitude, without loosing his hand, but checking her tears, and speaking in the soft distinct voice which had been very pleasant to Reginald Clint for a long time now. She went back to the death of her mother, and dwelt on Walter's conduct to her at that time; and then she told of the circumstances which had led to their hasty and imprudent marriage. Mr Clint seemed to understand her narrative perfectly, and to follow it with attention; she knew that he had in his mind the points of comparison between it and the story he had heard from Mrs Clewer. Only one thing she did not tell him—that she had been led to believe the separation between Walter and his father complete before she knew him. She would shield herself from no particle of blame, but him from all she could.

'We were both very young, sir,' she pleaded simply, and now with perfect composure, 'and very lonely, and we loved each other very much. I had no friend or protector except Walter, and he did this wrong thing for my sake. And then, when he had to leave me, because we were so poor, he wished to leave me near the only friends he had—for, indeed, Walter always knew you would be good to me, if the truth came out, and, and—if he never came back. And this too was done hastily, and because we were in a kind of desperation; and it was my fault, because I was foolish, and afraid of being left quite alone. I know I don't deserve that you should forgive such a great deception, but you will forgive Walter—for it was all my fault.'

No answer. But no withdrawal of the eyes, nor of the hand.

'When I came back here, and you began to be ill, and were so kind to me, I determined to deceive you no longer; but I could not tell you the truth without Walter's leave, and I wrote to him, and entreated him to let me tell you, and ask for your pardon for both of us. His letter must come to me soon, and I know what he will say in it, and how thankful he will be to know that I have besought you for him.'

'Who knows of this?' He spoke with difficulty, but her quick perception discerned the inflection of the old jealous pride in his tone. How many of those who lived in daily contact with him were aware of the trick that was played upon him? To how many had he been an object of ridicule?

'No one. Not a living soul but Miriam, and Walter, and myself. She has been the truest and the best of friends to me, and I sorely need her pardon too, for she did this for Walter's sake.'

'For whose sake have you been to me all that she never was, or could be, or Walter either?'

In all his life Reginald Clint had never spoken with such dignity, or such softness, as in these few words, which held Florence spell-bound. When she replied, it was in the lowest whisper: 'For Walter's, sir, and for your own, because I love you.'

Again there was a long pause, and then Reginald Clint turned restlessly, and with a moan of pain, and said: 'I believe you. There was one other woman in the world once who loved me—that is a long time ago—but no one else. Not Walter, and not Miriam, only their mother, and you.' He laid the hand he had drawn away from hers upon her bended head. 'I forgive him, for your sake; and I bless you, my child!'

While Florence was still kneeling, speechless, and weak with many emotions, there came a knock at the door. She rose and noiselessly admitted the nurse, who said at once, on seeing her face: 'Is he worse?'

'I think so,' whispered Florence. 'Come and see.'

They stood together on the side of the bed nearest the door. His face was turned away, and he seemed to sleep. They interchanged looks, but no words. Florence resumed her former position, and there was profound stillness, until Mr Clint opened his eyes and said to her: 'Who is there?'

'Only the nurse. You do not mind her?'

'No; I don't mind her; but don't you leave me. Stay with me until the morning.'

'I will stay with you,' said Florence; and she drew her chair close to the bed, where his waking glance could fall upon her. The nurse sat within the shadow of the curtains on the other side, and thus the two women commenced their silent watch.

It remained unbroken for some hours. It was many weeks since Reginald Clint had had so much sleep, or such freedom from pain.

In the early morning, he muttered a few words, and Florence bent over him to catch them. He was not asking for anything, and the words had no meaning that she could discern. He was only saying: 'After all, I have done him no wrong!'

He never spoke again, coherently. A few hours more, and his sleep had deepened into stupor, and, after two days, the stupor had sunk into death.

CHAPTER XXVI.—'AFTER ALL, I HAVE DONE HIM NO WRONG!'

Immediately after it was made known in the village of Drington that Mr Clint was no more, Mr Standish presented himself at the Firs, and asked to see Mrs Dixon. The state of mind in which the event, ensuing so rapidly upon the disclosure she had made, had left Florence was exceedingly painful. She had an intimate, consoling conviction that her husband's father had not received her communication with displeasure, but this conviction was one which she could not impart to any one, and she suffered extremely from the dread lest the revelation she had been irresistibly impelled to make, should have in any degree, by the mere action of surprise, accelerated Mr Clint's death. The end had come so unexpectedly, it had almost stunned her; and her position of responsibility, unbacked by recognised authority, was quite agonising. In the very presence of the dead man, as she watched the bloated features settling into the calm which lends dignity to even such a wreck as Reginald Clint, the question would arise: 'What was she to do now? He was dead; not, indeed, as she had dreaded, until all her powers of feeling seemed engrossed by that one terrible fear, without forgiving Walter; but nothing, except in point of that sentiment, was altered. He had forgiven Walter, and blessed her; but, let the dispositions he

had made, if there were any such, in the time of his fiercest anger, his most obstinate estrangement, be ever so hard and unjust, they must remain unchanged now. It had happened according to the desire of her heart, but it was all too late.

There was something more appalling to Florence in this death than in any other which had ever signified anything to her. Here was the stillness, the solemnity, the decorum, the circumstance, the ceremonial of death—but no grief. A decent regret on the part of three or four persons, a formal gravity of demeanour observed by the dead man's servants, and tempered by much conjecture about their chances of mourning and gratuities. But grief there was none. No riven hearts, shrinking from the thought of a new day, to arise on their unwelcome life, yearning with horrid anguish over the least little remembrances of the one, so lately all-engrossing in action, as well as in thought, and suddenly become so terribly unreal. Could there be anything so dreary and dreadful, Florence thought, as a house of mourning wherein were no mourners?

She had gone through the few sad formalities, and was resting, after having written briefly to Mr St Quentin, a request that he would communicate the fact of her father's death gently to Miriam; and had just decided that she would consult Mr Martin with respect to her own immediate movements, when she was told that Mr Standish wished to see her. She went to the study immediately, and there she found the lawyer and Mr Martin. Mr Standish was seated in the place which Mr Clint had habitually occupied, and the circumstance gave Florence's tender heart a stab. The place of *him* who lay there, up-stairs, white and silent, already knew him no more. Florence bowed to the two gentlemen, and Mr Martin placed a chair for her.

'You wished to see me, sir?' She addressed Mr Standish.

'Mrs Dixon?' She bent her head in assent.

'I received instructions from my late client, Mr Clint,' said the lawyer, with a formal civility which made Florence uncomfortable, 'to make the contents of this memorandum,' producing a paper as he spoke, 'known to you and Mr Martin as soon as possible after his decease. You will be so good as to take them into account in making the necessary melancholy arrangements.'

Mr Martin made no reply, and Florence had nothing to say. Mr Standish then read the memorandum, which was signed by Mr Clint, and consisted merely of a few lines, directing that his funeral should be very private and very plain, and that, prior to it, his will, which he had placed in the custody of Mr Standish, should be read.

'When it suits you to have this done,' said Mr Standish, addressing Florence, 'I shall be happy to attend for the purpose.' It was evident that she was expected to act in the absence of any direct representative of Mr Clint. But she appealed to Mr Martin, who undertook to do all that was necessary; and it was finally arranged that the will should be read on the day before the funeral, by which time Mr and Mrs St Quentin would probably have arrived at the Firs. This agreed to, Florence rose and left the room, feeling a little curious, and disturbed by Mr Standish's manner, which was, with all its formality, not quite respectful.

The hours dragged on, as they always do drag

on while the dread presence of the dead is with the living, heavily and wearily. On the third morning, Miriam and her husband arrived. Mr St Quentin's sense of decorum did not fail him on an occasion in which there was no real sadness to him; he conducted himself with perfect propriety, but Florence was conscious of the displeasure with which he observed his wife's incautious greeting of her supposed maid. Mr St Quentin had a peculiar faculty of making his anger felt without transgressing good manners, by cold, ironical politeness and well-arranged contempt, which Florence remembered, and under which she had often cringed. She felt his anger in the slighting glance which passed over her, but never lighted on her; in the slighting tone of his bare acknowledgment of her; the 'How do you do, Dixon?' which made Miriam's face burn, and her eyes flash. When the sisters-in-law found themselves together, Miriam burst into a bitter complaint of Mr St Quentin's conduct towards her, even before she inquired of Florence the particulars of her father's death.

'I do really believe he is mad,' she said, 'though there isn't much consolation in thinking so, since I cannot get rid of him by the conviction: he certainly is the most hateful and persecuting old man in existence. Do you notice how his bad heart and odious, suspicious temper are telling on him, Rose? He is shrivelling up into such an ugly old man; I am sure he looks many years older than poor papa did.'

Florence was silently thankful that Miriam was never to know what her father had looked like in the last days of his life. The face had been hidden away for ever before his daughter's arrival; and there was nothing to disturb that merciful process, to which the very best among us must owe so much one day, by which death blots out the memory of faults, and fixes the memory of every claim which the departed had to urge upon the affection and regret of his fellows.

'He is looking old.'

'Yes; and wicked, downright wicked. Ah, Rose, how wise and right you were when you warned me, in this very room' (she glanced around it forlornly), 'that the way of escape I seized upon so eagerly might not be a way to happiness!'

If Miriam had but known that the tyrant she had been so anxious to flee from had only a short time to live, how much might have been spared her! She did not think out this thought, but no doubt it was there, lurking in her mind; and Reginald Clint was, in this respect, reaping what he had sown.

Miriam heard Florence's account of her revelation to Mr Clint with great interest and emotion, and without any participation in the misgivings from which she was suffering. To Miriam's mind, the few words which her father had spoken were satisfactory and conclusive. Making the fullest allowance for his state at the time, and the near approach of his death, Miriam was not to be convinced that if her father had felt anger he would have concealed it, or been induced by any sentiment of gratitude to, or consideration for Florence to express any other feeling than anger. The last coherent words he had uttered—'After all, I have done him no wrong!'—duly reported to Miriam, were as inexplicable to her as to her sister-in-law. If they alluded to the rumours he had

heard about Walter and Florence Reeve, they were not to be understood, unless he had actually believed that a marriage had taken place; and any other meaning they might have had was completely out of the reach of the two young women. They might have been merely rambling, semi-conscious words, but Florence could not regard them as such; faint though their tone, their manner was purpose-like. There was no conclusion to be arrived at; they had to close their discussion where they commenced it. The whole of this day Miriam passed in seclusion in her own rooms. She had left Bianca in Paris, and Mrs Dixon seemed to resume her former functions naturally. It was agreed between the sisters-in-law that the truth respecting Florence should be told to Mr St Quentin after the funeral. Miriam was much distressed by the necessity for the disclosure, but she had no choice. Florence was now houseless and unprotected, and Miriam must provide for her in some way, let the terms of Reginald Clint's will be what they might, until her brother's return. That Mr St Quentin would not permit her to fill her former position in his house, Miriam felt assured, and she expected her to prove still more obnoxious as Walter's wife. The night closed around hearts full of anxiety and disturbed by heavy care, in the house where lay the dead man for the last time but one.

'I am particularly directed, by the terms of this memorandum, to request Mrs Dixon's presence at the reading of the will,' said Mr Standish, when, on the following day, he met Mr and Mrs St Quentin, Mr Cooke, and Mr Martin, in the dining-room at the Firs, for this pre-arranged purpose.

At this announcement, Miriam looked surprised, and Mr St Quentin looked angry and aggrieved.

'A most extraordinary direction, I must say,' he objected, turning himself about pompously in the huge red-leather chair, which he had assumed with a president-of-council kind of air. 'What can she have to do with the matter?'

'That may perhaps be explained,' said Mr Standish. 'With your permission, Mrs St Quentin, I will send for Mrs Dixon.' He stretched his hand towards the bell, but Mr Martin prevented his ringing it. 'Stay!' he said; 'I will go and fetch her,' and left the room for the purpose, with an odd look of sudden intelligence in his face. He found Florence in the ante-room to that in which the coffin was awaiting removal, and told her his errand, adding: 'There may be something agitating and painful for you in this, my dear; but you will, I am sure, be as you always are, patient and strong, and self-possessed.'

Florence glanced at him, as the unusual appellation, in so unusual a tone, passed his lips, but she said nothing; she merely rose, walked down the stairs by his side, and, obedient to his gesture, passed into the dining-room in advance of him. Miriam, who was extremely pale, greeted her entrance with a faint smile, Mr Standish bowed, and Mr St Quentin said with disdain: 'You can sit down, Dixon. You are required, it seems, to hear Mr Clint's will read.'

Mr Martin placed Florence between himself and Miriam, and, with a queer glance at Mr St Quentin, said to Mr Standish that they were all ready and attentive. The lawyer then untied the outer cover of a parcel of no great size, which lay on the table

before him, and broke the seal of a large blue envelope. It was evident that Mr Clint's will was no voluminous document; and the reading of it, after the accustomed preamble, did not occupy five minutes.

The will was as clear as it was concise. The testator bequeathed all the property, of every kind whatsoever, of which he died possessed, with an exception hereafter to be mentioned, to 'the best, kindest, truest woman it had ever been his fortune to meet; to her who had alleviated the last months of his life, when both his children had forsaken him; to the only person in the world in whose disinterested services he had confidence, and to whom he now tendered this acknowledgment; to the young woman known as Rose Dixon, formerly in the service of Mrs St Quentin, the testator's daughter.' The will appointed Mrs Dixon sole executrix, and Walter Clint's name had no mention in it. Miriam had a place, but an inconsiderable one. Mr Clint bequeathed to his daughter the sum of one thousand pounds, and certain jewels which had belonged to her mother, with the agreeable proviso, which Mr Standish read out with an irrepressible twinkle of satisfaction in his keen gray eyes, that the money was to be allotted to her sole use and benefit, as the testator did not wish any advantage to accrue from him to the 'wealthy cheat' his daughter had married.

Florence did not faint. She could not stand, or see, or speak, but she was conscious—conscious that Mr Martin had taken firm hold of her—that Miriam, with a cry of 'Oh, my darling!' had thrown herself on her knees beside her, and was clasping her round the waist and crying wildly—conscious that Mr St Quentin had struck the table violently, and declared, with a great oath, that the will was an unparalleled infamy, too bad for even the drunken madman who had made it, and that Walter Clint should break it—conscious that Mr Cooke and Mr Standish were profoundly silent.

Presently the room becomes steady, it ceases to swim before her eyes, and she finds Miriam, rudely grasped by Mr St Quentin, and forced up from her kneeling attitude beside her; but Mr Martin does not loose his hold of her.

'How dare you disgrace yourself in this way?' said Mr St Quentin to his wife, in a voice half-suffocated with anger. 'What do you mean by calling this woman endearing names, by putting yourself on a level with a vile schemer, who practised on your mad and drunken father, and has done her best to rob yourself and your brother? A woman of whom I always had the worst opinion, and would have turned out of my house, if she had not gone, for her own purposes. What do you mean by it, I say?'

'Mr St Quentin,' said Mr Martin quietly, 'if you are not conscious of the extreme indecorum of your conduct on the present occasion, and of the impropriety of your language, it becomes necessary for me to remind you that we who are present cannot permit you to behave in this manner. You must not apply such language to Mrs Dixon.'

'And who the devil are you, sir, that you should dictate to me?'

'I am Mr Clint's oldest friend, and one of the witnesses to his will.'

'You ought to be ashamed of yourself to acknowledge it.'

'I had no knowledge whatever of its provisions.'

I am not prepared to say that I approve of them; but *I am* prepared to say that the description which Mr Clint has given of Mrs Dixon is as correct, as the epithets you have applied to her are unmerited.'

'Indeed! My wife's servant seems to have made an extraordinary impression. I believe *you* are a bachelor, and have money to leave away from your relatives. You and these gentlemen'—indicating Mr Cooke and Mr Standish, with a sneer—'are, of course, at liberty to think and act in this matter as you please. As for me, I consider this house no fit place for my wife, and I shall remove her from it forthwith.'

'Hush, my dear; keep quiet,' whispered Mr Martin to Florence, who, shrinking into the recesses of her chair, and trembling, seemed to be trying to speak.—'I conclude you do not mean that Mrs St Quentin is to leave her father's house before his funeral?' he added coldly.

'*I do* mean it; I will not attend the funeral of the disreputable old drunkard, who was such a fool and such a scoundrel as to be led by the nose by a woman in this way.' He turned suddenly on Miriam: 'You will get ready to leave this house in half an hour, and during that time I forbid you to have any conversation with this person.'

During this angry dialogue, Miriam had stood quite still beside Florence's chair, not touching her, not looking at her, but following every gesture of Mr St Quentin with her great golden eyes, filled with anger, disdain, and a terrible dislike. After he had pulled her up from her knees, she had shaken his hand from her arm, with a loathing shudder, as if a toad had touched her; and, even in that moment, he had been conscious of the action, and of the disgust which it betrayed. Miriam had never been so completely off her guard before; he noted the fact, understood it, and never forgot it.

When he uttered this peremptory order, she made one step forward, and confronted him, her face entirely colourless, her lips set, her eyes gleaming.

'I will not leave this house,' she said, in a low, harsh voice, uttering every syllable with deliberate will; 'either now, or at any other time, in obedience to you. Your detestable behaviour has broken down every barrier of restraint which would have prevented my speaking openly before these gentlemen, my father's friends and my own. I will remain here, and I will see as much as I please of her' (she touched Florence's hair with a caressing hand), 'whom my father loved, who was more to him than I ever was, or would have known how to be; whom he has rewarded, to the best of his ability, and whom he appreciated at her proper value.—Gentlemen!' Miriam made a gesture with her hand which directed their attention from herself to Florence—'in a short time you must have known the truth, which Mr St Quentin's intemperate language obliges me to disclose before we had intended it to be proclaimed. How false every word he has uttered is, you are all aware; you need nothing to strengthen your conviction of that; but even *he* will be ashamed of himself when he learns that this lady, my beloved friend, called here Rose Dixon, is Florence Clint—my brother's wife—and that before my father died, he knew it.'

Mr St Quentin did not leave the Firs; but

neither did he attend the funeral of Reginald Clint. He had been somewhat hotly pursued of late by a much-dreaded enemy, fatal to his most cherished pretensions to youthful energy and fascination—gout. Aided by the stormy emotions, to which he gave their passionate way, it came up with him, and dealt him a hard blow. He found himself condemned to the double humiliation of being Florence's guest and Mr Martin's patient.

When the wonder and excitement of these events had somewhat subsided, Florence and Miriam, comparing notes of their feelings, found that in the case of each the first conscious impression made by the reading of the will had been its elucidation of Mr Clint's mysterious words, its explanation of how indeed, 'after all, he had done his son no wrong.'

THE QUEEN CHARLOTTE ISLANDS.

In 1776, Captain Cook landed on the northernmost shore of a portion of land in the North Pacific Ocean, which he was unable to define as an island, or as forming part of the American continent. He did not claim the country for the British crown, nor did he name it; but, in 1787, Captain Dixon ascertained that the discovery consisted of an extensive insular group, of which he took possession in the name of King George, and called it Queen Charlotte Islands. Eighty-five years have elapsed since then, and though these islands are healthy, picturesque, and rich in natural resources, no serious attempt has been made to colonise them. There they lie, waste, fallow, and yet marvellously productive, as we are told by Mr Francis Poole, civil and mining engineer, the only educated Englishman who has ever lived on Queen Charlotte Islands.*

The group consists of two large islands, called Graham and Moresby, which, with two smaller islands, measure 180 English miles by 60 at its greatest width. There are numerous islets, among which one called Skincuttle is prominent, and there Mr Poole fixed his head-quarters, when he arrived there, after six days' sail from Vancouver, with the purpose he thus describes: 'I was convinced, from observations and calculations I had made on the mainland, almost opposite Queen Charlotte Islands, there was copper to be found in the group of islands which lie out from the coast to the north of Vancouver. This opinion received a singular confirmation from the fact of a native of those islands having brought down a sample of copper ore to Victoria, under the impression that it was gold. In a short time the nucleus of a company was got together, and entitled the Queen Charlotte Mining Company, and I undertook to go and sink the requisite shafts.' Mr Poole mentions this very simply, but it was a hazardous undertaking, considering that he had no 'government' protection, and that the hostility of the natives of the islands was well known at Vancouver. But it happened just then that a savage named Kitguen, who claimed the head chieftainship of the islands, was at Victoria, and Mr Poole brought him before the governor, and induced him to promise that his tribe should not molest the party, and that he

* *Queen Charlotte Islands; a Narrative of Discovery and Adventure in the North Pacific.* By Francis Poole, C.E. Edited by John W. Lyndon. Hurst and Blackett.

would protect them from any other tribe disposed to contest their landing or interfere with their explorations. Kitguen proved docile and propitious, and Mr Poole gave him a free passage to his home on board the schooner *Rebecca* (20 tons), which was partially chartered to deliver the party and their implements at Queen Charlotte Islands, on her way to the Stickeen River gold mines.

The voyage was very stormy, and when off Cape St James, the travellers encountered a novel kind of shower-bath, consisting of a sprinkling of seawater, which swept in a perfect tempest from the surface of the waves, and was driven like vapour before the wind. The British Columbians call it the *spoondrift*, and it is peculiar to those seas. The coast of Skincuttle is very beautiful, low-lying, and timber-clad. Cedars, huge and venerable; pines, stalwart, and yet everlastingly young, crowd almost every available spot of ground. The day after the mining-party landed, the schooner sailed again, and then came a sense of great solitude. The first rain which had fallen for months came down in torrents the next day, and the natives, who had been suffering much from drought, imputed this happy occurrence to the strangers, so that their safety and popularity were at once secured. Mr Poole came upon a copper lode almost immediately, and the shaft-sinking was at once commenced by eight workmen, whose services he had secured by very high wages, rendered imperative by the competition in the Victorian market. While they worked, Mr Poole—taking one assistant, his gun, and his hammer—explored some of the islets of the group, finding them very beautiful and full of variety, and speedily ascertaining the presence of bears and eagles amid their peaceful, luxuriant scenery. He frequently watched the eagles fish-catching. 'Their practice,' he says, 'is to perch themselves on a high tree, on the verge of some promontory. From thence they come down in one fell swoop upon the unsuspecting fish, sometimes devouring them, sometimes carrying them away as food for their young. Sometimes the seagull will try the same manœuvre, though, of course, on a very limited scale. Upon that, the ever-watchful eagle, uttering a ferocious shriek, darts instantly after him in pursuit. The bald or white-headed eagle may be seen in every part of these islands.'

Kitguen was true to his promise, and the white party were well received among the kindly islanders, among whom he made a formal progress. They are a curious kind of savages, given to thieving and liquor, but not devoid of intelligence, and fond of forms and ceremonies. The proceedings, on the occasion of the Englishman's first visit, were very formal. Kitguen accompanied him to Laskech, where the chiefs were assembled in council, and, after a long complimentary harangue, they requested a written testimonial from him, which he gave. They have an extraordinary veneration for writing; any old bundle of waste-paper, if only there are written characters upon it, is precious and sacred in their eyes. After the expedition to Laskech, Mr Poole accepted an invitation to sleep at the patrimonial mansion of Kitguen, whose title was Chief Klue. 'His house was a largish one, built in the usual Indian way, of wood laid horizontally in light logs, and slightly elevated above the ground upon a platform. Despite the sheen of the moon, I looked in vain for the entrance, and was beginning to think there

must be some Indian dodge in its concealment, with a view to providing against sudden attacks, when a Klootchman (native woman) came to my assistance. Approaching a big hole, three feet in circumference, and three feet from the platform's base in the front of the house, she very unceremoniously thrust first one leg through, evidently without touching the bottom on the other side; secondly, her head and arms; and finally, by means of a dexterous jerk, dragged the rest of her body after her. This was the door, then. I tried to get into the house as the pretty Klootchman had done, and succeeded at the second attempt. The inside of the house was one large room, with a fire smouldering in the centre, but no window or outlet for the smoke. The only rays of light came through the big hole in the wall. Cedar-bark mats were spread upon the floor, and upon these we all lay down together, with our feet firewards, and our heads outwards, like the spokes of a wheel. I tossed about nearly all night, and as the small-hours advanced, found my head knocking against an upright pole, which served no architectural or ornamental purpose. An impulse seized me to get up and examine it; but, as that would have looked like a betrayal of fear, I lay still. Presently, an accidental kick from one of the Indians caused the fire to flare long enough to reveal to my horrified senses at least a hundred scalps, fastened round the top of the pole, right above me! Need I say that I made my escape as soon as I could prudently do so?

These savages, though they live more in their canoes than on land, were quite astonished when they saw the white men swim; they had no notion of the art, in which they differ from all other coloured races. When the shaft had been sunk, and a comfortable log-house built, when Mr Poole had made many pleasant exploratory excursions, a fleet of strange canoes made its appearance, and Chief Klue announced the arrival of an inimical tribe bent on war and plunder. They began by pretending that they wanted to trade, but they omitted to produce any article of traffic, so they were kept out of the log-hut, and the men were ordered to look to their firearms. That evening, Klue disappeared, it was supposed in search of reinforcements; and the next day, the weather being squally, the menacing canoes also departed. Mr Poole, thinking there was an end of the affair, went off to the south-west of Skincuttle, where he discovered a magnificent harbour, but had not time to enter and prospect it. As the exploring party steered into their own little harbour on their return, they beheld it crammed with canoes. Each canoe had in it a large crew of Indians, bedaubed from head to foot with war-paint, whilst the clearance around the log-house was crowded with yelling and dancing savages. Of course, Mr Poole concluded that his men had all been murdered, and that the enemy, in full possession of the islet, were merely whiling away the time until he and his companion should arrive to be disposed of in like manner. Under this conviction, he says: 'I resolved to put a bold front on the matter, and venture into the midst of them; so headed direct for the landing. In another moment we were ashore, and in amongst the savages, who had swarmed down to the beach. I dashed through the crowd, a revolver in each hand, right to the log-house. It was completely in their

possession, but all the men were safe. I had arrived just in time to prevent a massacre.' The Indians had not, in fact, howled and danced themselves up to the necessary pitch of excitement to begin murdering men who would certainly sell their lives dearly, and Mr Poole's return arrested the proceedings, and substituted a palaver. The moot-question was rather a complicated one relating to blankets, and Mr Poole decided it to the apparent satisfaction of all parties. The details exposed a good deal of treachery, and convinced the white men that they must not neglect strong and vigilantly maintained precautions for defence. Shortly afterwards they shifted their camp to Burnaby Island, a very beautiful spot, where the chief swore eternal friendship, and his daughter visited them, to 'caution them against a bear which had been seen sniffing about the island.' Mr Poole went in search of the bear, but did not encounter him; he did, however, find a very fine vein of copper; and shot a crow, to the horror of the natives, who firmly maintain their descent from that bird. Hence, they will never kill one, and resent all attempts to destroy the crows' nests which abound. This notion likewise accounts for the coats of black paint with which young and old in all the tribes constantly besmear themselves.

On returning from this expedition, Mr Poole had again to settle a quarrel, this time between his cook and the eternally friendly chief, Skid-a-ga-tees; his endeavours were successful, and the chief sent him next day a halibut weighing over a hundred pounds! So much for the fish-diet in Queen Charlotte Islands. It was a very dull life. The labour of the day over, or the generally unsuccessful hunting, there was nothing for it but sitting round the log-house fire, telling 'camp stories,' so that Mr Poole was glad when the time came for his visit to Victoria, Vancouver Island, in order to present his very satisfactory report on the prospects of copper-mining in the islands. On his return, the work was pushed on with increased vigour, and the natives began to take a deep and intelligent interest in it, which proved their capacity for civilisation. They desired to have the results of the processes which they witnessed explained to them, and generally evinced an intelligence which Mr Poole considers far in advance of that of illiterate white men in England. The size and population of London and of Europe, the properties of gas and steam, the art of photography, but especially of telegraphy, filled them with astonishment. When the chiefs heard that ere the present race of Indians are very old, those at Burnaby would be able to converse with their stray friends at Victoria, or with other tribes on the mainland, without either party moving from their respective positions, they held up their hands amazed. 'Powerful is the white man, wise and powerful!' exclaimed Klue frequently. It is lamentable to know that nothing is being done for these people, of whom Mr Poole says: 'They need to be continuously guided, watched, and controlled, and that too by exceptional teaching and legislation; for, to our eternal disgrace, chiefest of all the requisite precautionary measures is the necessity of keeping them from contamination with the average run of traders in the North Pacific, the majority of whom have a lower moral status than the veriest savage.'

The beauty of the islands is equal to their productiveness; and the climate, never in extreme, is salubrious and delightful. Mr Poole was obliged to relinquish his post, in consequence of the persistent ill-conduct of the white men in his employment, but not until he had thoroughly investigated the resources of the islands, and satisfied himself of their immense extent and value in future schemes of colonisation. He says, deliberately, in summing up his experience: 'It is a land of enchantment. One can hardly feel melancholy living by those beautiful uninhabited shores. Such varied and magnificent landscapes, such matchless timber, such a wealth of vegetation, such verdure and leafage up to the very crests of its highest hills! Its agricultural and mineral prospects are undeniable. Where does another climate exist like it, uniting the charms of the tropics to the healthiness of temperate zones, and yet remaining free from the evils of either? No rat or reptile has fixed its home on these islands, nor even a noxious insect. Fogs are very rare. The storms, if sometimes severe, are mostly sea-storms, invariably following a law, and never lasting long. The snows, on the coldest day in winter, dissolve soon after touching the ground; while the sun, during much the greater portion of the year, sheds its effulgence, but not its glare, the whole of the live-long day down upon that virgin country.' With the natives, more especially the Skid-a-gates, Mr Poole believes much might be done. When he found his men quite unmanageable, and determined upon leaving the islands, the grand question was, how was he to get away? The mutineers laughed at his remonstrances, and had nothing to fear from his threats. But he consulted Klue, and resolved upon a most courageous and adventurous course. One day, a grand state canoe, which the white men had never seen, and did not know of, came sailing like a huge swan round the headland. Then the mutinous miners saw that the game was up, and that, if they dared to touch Mr Poole, they would be overwhelmed by the loyal natives. He briefly told them he was about to leave the island, and make a canoe-voyage to Vancouver. They were to be left in responsible charge of the mine and implements, to be supplied with ammunition and sufficient provisions to last them until a ship could arrive with fresh orders, or to take them away. They sullenly acquiesced. Mr Poole's belongings were put on board the spacious canoe, and Mr Poole took his place in it. The scene, as he describes it, was very impressive.

'The workmen hung sulkily back, while the rocks and woods were filled with Indians to see me sail away from among them. They did not cheer nor weep, but they moved their arms up and down with a sort of moan or wail. The heavens were lit up with streaming splendour, while the sun began to sink low to the westward. My eye caught a curved line running along the far east from north to south; this curve formed a part of the mighty range of the Cascade Mountains; fit barriers to mark an empire. Between us lay, calm and serene, the wide waters of Queen Charlotte Sound, reflecting the golden hues of the realms above. With one steadfast gaze upon the beautiful isles of the sea I was leaving, and one farewell wave of the hand, I turned to commit myself to the most arduous voyage perhaps ever made in the North Pacific Ocean.'

The impression made by Mr Poole's narrative is

altogether favourable, both as regards Queen Charlotte Islands and their inhabitants. The natives are physically, intellectually, and morally superior to any other of the North Pacific tribes, and are quite exceptionally well disposed towards white men. They have some vague notions of a religion, of a Great Spirit and a future life; they are not cruel or revengeful, and not vicious, except that, like all Indians, they are inveterate gamblers. They have a sad kind of native music, and they cook their food, two indications of rudimentary civilisation. They keep many festivals, but the celebrations are innocent enough—they certainly are not 'orgies.' The women are decidedly good-looking, and both sexes have naturally fair complexions; the 'black' in their case being entirely artificial. The institution of marriage is quite unknown, as also is polygamy. So much for the people. The place produces valuable minerals, and the soil is incomparably rich. The timber is superb and various. Potatoes grow in large quantities. Fruit of fine quality is abundant, and the creeks and streams swarm with fish. Queen Charlotte Sound is a playground for whales and porpoises. The stock of game is marvellous in profusion and variety. 'For twenty years hence,' says Mr Poole, 'no colonist of the islands need starve if he possesses a gun, and can hit a haystack.' The present breeds of bears, seals, ermine, and marten, would supply fur enough to make the fortunes of half-a-dozen fur companies. The native population numbers less than five thousand. It is a remarkable fact that the natives know nothing of the use of spears, or bows and arrows, so that until they got muskets from the white men, the game on the islands had a pleasant time of it. Even now the Indians are only able to shoot an occasional seal, or at most a duck or a goose.

These isles of the Far West lie directly in the high-road of the immense system of commerce which will be established in the not very distant future, when unbroken steam and rail communication with the North Pacific Ocean will give to England and Canada a new outlet for the exports to the western sea-boards of the two Americas, and, farther on, to Japan, China, and Australasia. 'If, therefore,' says Mr Poole, at the conclusion of his most interesting narrative, 'their beneficent climate, and the magnitude of their mineral and agricultural resources, be judiciously appraised beforehand, their prosperity will be secured.'

A COUNTING-HOUSE ROMANCE.

IN NINE CHAPTERS.—CONCLUSION.

THE two partners here each drew a sigh of relief; and the old gentleman said: 'I presume you think that Mrs White is not dangerous—will not trouble us?'

'I don't know; I should not like to trust her far,' said Capelmann: 'she is nearly as bad as her brother, and of a more desperate temper. But—but I can silence her.' The baker seemed to speak this with a little reluctance. 'I don't like to do it, but right is right. You have committed bigamy, sir'—to Mr Ambrose this, of course, was said—'you must excuse my plain speaking; you have committed bigamy, but so has she; and what is of more importance, she married again before you did. Her name from that marriage is HIRRSLEY. I don't know how you came to call her White; but she

may have the same sort of right to that name, for all I know; it's likely enough; but, at anyrate, she married a man before you had been out of the country two years. She is a great coward at the idea of imprisonment. She has a superstitious dread that she shall end her days in a jail or a lunatic asylum, and upon that feeling I can work.'

'But can you prove her marriage?' asked Mr Perrow; 'and will the second husband come forward? Who is he? Where is he? We never heard of him. Do you know anything about him?'

'It must come out, I suppose,' said Capelmann, with more hesitation. 'Her husband is my poor sister's child, the very party that your clerk consulted at the *Dover*, and my nephew.'

This communication, which was utterly unexpected by the partners, seemed to surprise and startle them more than all which had gone before.

'He—he had been sent away by government to Bermuda, Mr Ambrose,' continued Capelmann; 'that is the fact, and that is how he came to know you in the West Indies. I hardly remember how he first met Harriet Gyllon, but, at anyrate, they were married before they had known each other six weeks; and they didn't live together a year. To upset such rascality as Vann is plotting, poor HIRRSLEY will come forward, although he is very reluctant to do so. He is very poor, and gets but a precarious living by following races, and so on; still, I do assure you that he's not a bad fellow when you come to know him; and if you are disposed to do anything for anybody after this business is settled, I should like you to do it for him. Well, gentlemen, I have said all now; and I think we hold everybody safe enough.'

'I should think we did!' exclaimed the old gentleman exultingly. 'My dear sir, you have saved the house of Perrow and Son, and whatever we do in return, we shall still be, and must always remain your debtors.'

'Of course, if they like to be obstinate,' said the cautious baker, 'they can do you some harm still, but not very much; her bigamy takes the sting out of it. From what I know of the people, however, I think they are quieted.'

'I will take my chance of that,' said Ambrose, and then the three shook hands. Some very rare wine was produced from a closet, and with a repetition of histories on all sides, and comments thereon, the sitting was prolonged until nine o'clock; realising the worst fears of the clerk in waiting, who, by this time, was driven almost frantic under a sense of his injuries, and a desire to annihilate the corpulent stranger.

When at last, with excited manner, beaming faces, and general laughter, the three came out, the clerk assumed an expression as near to the demoniac scowl the occasion demanded as he dared.

'Oh, by-the-bye, Steele,' exclaimed the elder partner, 'you will see that Jarvis has the keys of the office; give them to him before you go. And, Steele, I am afraid we have kept you a most unreasonable time; but you can take all to-morrow as a holiday, to make up for it.'

The three passed out, leaving the young clerk in a world which had suddenly changed from all that was dark and gloomy to a rose-strewn, myrrh-scented bower.

The morning was one of the brightest which can cheer an early spring, and as a long spell of

dull unfavourable weather had preceded it, the contrast was so striking, that every living thing seemed to feel its influence, and to rejoice in the breeze and the sunshine. Vann, not usually impressionable, was affected by the change, and felt his step lighter and more elastic, and his spirits unusually buoyant, as he walked towards the office. Although he had awakened with an unpleasant recollection of the quarrel with his sister, and an undefined dread of the possible consequences, yet this had been shaken off, and he accepted, in his unwonted exhilaration, a presage of the good that was to come.

He arrived about his usual time, and got out his usual work to employ him until the partners came—his partners, as he said to himself with a chuckle; but he was somewhat surprised to find they were already in the office. This, however, he took as a good sign. There was no disposition on their part to shun him, that was clear; and to have the last few words said before the heavy business of the day began, was best. He had noticed, when he came in, a big grazier-like man who sat on a chair in the large office (Vann's office was a small one), and who was probably waiting the leisure of the firm. He seemed rather nervous, as strangers often appear in a room surrounded by clerks, and he kept pulling out a handkerchief—a great staring silk thing it was too—and rubbing his forehead with it.

'Aha! my man,' thought Vann, 'you and your like will be in my department, I expect, by this day month. It will be: "Mr Vann can see you, sir; please to step this way." These thoughts were natural enough to him, and were, so far as he could see, probable in their fulfilment.

Vann having occasion to enter the large office, the stranger, with, no doubt, a desire to scrape away the uncomfortable feeling of knowing no one, moved his chair with unnecessary civility, and said: 'Servant, sir. Fine morning.'

'Very fine indeed,' said Vann; then, at a hazard, added: 'beautiful weather for the country.'

The stranger did not reply, but took out his silk handkerchief, and again rubbed his face, staring at Vann with (so the latter decided) the helpless want of resource natural to the rustic mind. Just then, the familiar gong sounded, and the message, less familiar of late, was heard: 'Mr Vann, will you please step into Mr Perrow's room?' Vann obeyed the summons with an ill-concealed chuckle; and on entering found, as he had anticipated, both the partners there. 'Good-morning, Mr Perrow.—Good-morning, sir,' he added, to Ambrose. Vann was respectful in his manner; he intended to be so, and to continue so. He had resolved that, excepting in the great change itself, there should be nothing whatever to make the partners regret his admission to the firm. This feeling had only grown on him since his success was assured, and was as genuine in its way as the insolent mood in which he forced on his plans.

In the midst of his good temper and buoyancy, Vann was checked by an indefinable coldness upon the faces of his partners: he had calculated on their being in a mood differing from his own, but there was something ominous in the sternness of each face, and he felt that it might, after all, be necessary to do battle again, before his rights should be freely acknowledged. 'I believe you sent for me,' he said, and perhaps there was a little

of the old insolence on his tongue, for Mr Perrow looked up with a very curious smile before he answered.

'Yes, we did,' he said, his style being very brief. 'We sent for you, Vann, to say that we utterly refuse to have any negotiation with you, and that, while we will not drive you to desperation by harsh measures—which, of course, would not be to our advantage—we will listen to no more of your absurd plans and proposals.'

Vann looked from one to the other, and his chest heaved with the surprise and excitement he felt on being so addressed. 'If you are serious,' he began, after a pause, 'you might just as well have told me this yesterday. Things are the same now as they were then, and I can send you to the Old Bailey as easily.'

'There is your error, Vann,' returned the old gentleman; 'things are not the same. Did you see a stout, country-looking gentleman in the large office, as you came in?' Vann nodded, wondering at this sudden digression. 'Then,' continued his master, 'I can only tell you that if you were to attempt to leave this house, unless accompanied by one of ourselves, you—yes, *you*—would be handcuffed and on your way to the Old Bailey instantly; for that stranger is Fred. Armstrong, the celebrated detective! You need not assume a stare of astonishment, my good fellow; you have had a long run, I know, but you must have been ready for a blow-up at any time, and now it has come. You are Richard Gyllon, formerly of Manchester.'

'Hang it!' gasped Vann; 'this is my sister's work!' He turned deadly pale, and sank into a chair as he spoke.

'You are quite wrong there,' said the old gentleman, who was as cool as the other was agitated: 'we have not seen your sister. You have not mentioned Mrs White's name, but we do not doubt the relationship. You are Richard Gyllon; you robbed your employers; you absconded, assumed the name of a clerk who went abroad, and forged testimonials from the firm he served. Forgery and embezzlement, Mr Vann, are words heard at the Old Bailey, surely, as often as any others.'

'If they are,' said the clerk, and the words from his white lips were scarcely audible, 'and I'm not going to deny anything—you have got on the right scent, somehow, but I will beat you yet—if you hear of forgery and embezzlement, so you do of bigamy, and if I stand in the dock, so will he; you forget that.'

'We forget nothing,' said Perrow senior; 'this is merely another of your mistakes: we ought, however, to give you a little information. Your sister married again, some years before Mr Ambrose did so; and had he chosen, he could have obtained a divorce, but he did not wish to expose his folly to the world.'

'That is a lie! I never heard even a rumour of such a thing,' said Vann.

'You were not likely to hear of it,' returned his master; 'but it may save you some trouble if I tell you that we can produce the husband at a few hours' notice, and that you know him very well. Ask your sister when you see her; and if she deny it, come to us again. Now, sir, in the face of this statement, which—and you may as well accept it at once—is literally true, what do you think we have to fear, excepting so far as our comfort is concerned, from any exposure of yours?' Vann

seemed trying to say something in answer, but could get out no articulate sound; and Mr Perrow went on. 'I told you before, and I tell you again, that we do not mean to take any very harsh measures. We mean, nevertheless, to take very decided ones; and rather than have you triumphing in the idea that you had us in your power, we would bring on the crisis at once; for this purpose, we have asked the detective to attend. But, considering that there has been wrong, as we own, on both sides, we are willing to provide for your sister as before, and to find for you a situation as good as this, in America. We can do this in a large mercantile house there, and you will have an easy time of it; dependent on your good behaviour. So long as you hold your tongue, you will have an honourable living secured, with fair promotion. Do you accept our terms?' Vann looked sullenly from face to face, and had he possessed more physical courage, might have made a dangerous attack upon the partners, for he was baffled, savage, and boiling with a desire for revenge. 'I ought to say,' added Mr Perrow, 'that these terms are much more lenient than those we had at first decided upon, and are wholly due to the request of the gentleman who gave us the chief part of our information—Mr Capelmann, of Parble Street; but for him, we should have proceeded very differently.' If Vann had looked pale before, his aspect was now absolutely ghastly: the partners moved towards him, for they thought he was about to faint, but he waved them off and rose, although with unsteady feet.

'It's all up,' he said in a husky whisper: 'I accept your offer. When do I go?'

'Call there in a week,' said Mr Perrow, handing him a card; 'by that time all will be arranged. Be faithful to us, and we will do more than we have promised.'

Vann took the card, round which was a bank-note, looked at the partners with vacant eyes, and then, walking like one who walks in his sleep, left the room and the house. The grazier-like man rose from his chair when he appeared; but at a signal from Mr Perrow, who had followed his clerk to the office door, he sat down again, and again wiped his forehead with his silk kerchief.

And that was the last time that any of the clerks in the employ of Perrow and Son ever saw Frederick Vann. Nor, after that day, was he any more seen in the neighbourhood in which he had lived; he paid his landlady his arrears, packed up his slender wardrobe, which was fetched on the following day by a messenger, and left without saying a syllable as to where he was going. Nothing was ever afterwards heard of him by any of his former comrades, save that young Steele—formerly clerk at Perrow and Son's, but who obtained a capital berth a few years after in the great shipping house of Black and Company—once remarked to the man sitting next to him: 'By Jove, sir, the corresponding clerk at Yawls, Higgs, and Merrybees, of New York, writes a peculiar hand, just like a fellow did who disappeared in a most mysterious manner from a house I was once in. It is supposed he was garrotted, or something.' He dismissed the subject thus briefly; and, so far as is known, none of Vann's old associates ever spoke so much of him, after his first disappearance.

This, of course, does not refer to Mr Capelmann or his household; they often spoke of him. The

baker was very much incensed against Vann, and being of full, stubborn, German breeding, never forgave him: he had advised the firm, from motives of policy, to make pretty good terms with him, yet he never forgave him the offence of aspiring to Bessy's hand, and offering her father a bribe to break his word. It may be doubted, however, whether Bessy saw the offence in quite so serious a light, for she sometimes took his part; and as not only before marriage, but afterwards, the young ironmonger was entirely ruled by her, he also came to consider Vann a little harshly dealt with. At any rate, his falling in love, so violently in love, with Bessy was a compliment to the young lady, and to the ironmonger's taste, and so what offence there was in it could easily be forgiven. As the young people were not informed of all the negotiations which accompanied the departure of Vann, they were very much surprised at seeing Bessy's scapegrace of a cousin, Tom Hirisley, go off, in grand style, to Australia, with the intention of setting up in some kind of business. Where he got the money from, they could never divine, but supposed it was by betting. If so, they argued, he must have been remarkably fortunate in his speculations, for he made them several valuable presents; or, at any rate, they received several valuable presents in his name, one being no less than a splendid service of plate—'All real silver, you know,' as Bessy would say. Her father chuckled a little, at times when she extolled her cousin's unexpected liberality, but said nothing in explanation. He might, it is probable, have thrown some light on these gifts, had he chosen.

There is very little more to tell about the characters in this story. Ambrose Perrow was noticed by his friends to have become suddenly a graver man; while his wife, as besemed the wife of so prosperous and respectable a merchant-prince, held her head higher with each succeeding year. She was fortunate in her husband and in her children; for several very fine boys and girls played in the garden where Vann had once entered, until, on the decease of his father, Mr Ambrose became the head of the firm, and was persuaded to remove to a villa standing in its own grounds, at Hampstead. There, too, the prosperity continued, and Mrs Perrow held quite the sway amongst those of her own standing in the neighbourhood, taking the lead in charitable and religious organisations more especially: she was a most useful and active committee lady, but a little inclined to severity when women were to be dealt with. She had no toleration for them, and no sympathy with those who had, as she shewed on one occasion, which we will, out of many, cite as an illustration.

She was shocked by her husband dropping his newspaper, with a groan, one morning at breakfast-time, when, moreover, he was obliged to go out into the open air—although there was a bitter frost at the time—to keep himself from fainting. She naturally examined the paper to see what had so disturbed him, and—though he would never own it, and was even harsh in his manner when questioned upon the subject—she felt sure that he was thus upset merely by reading an account of a fatal accident to a dissipated creature at Greenwich. It was, after all, only a fitting end to such characters, and, to her mind, the marvel was that such judgments did not occur more frequently. The paragraph was not a long one, and it appeared that

a woman, whose name was Jane White, and who lived, as just said, at Greenwich, had been for years in the habit of drinking to excess, and on one particular evening she had set fire to her bed-curtains, and was burned to death. It was fortunate that the only life lost was her own, for people living in the same house, and tacitly encouraging such conduct, had indeed reason to be thankful that they were spared. So Mrs Ferrow said when speaking, in confidence, to another committee lady; and thus was expressed the sympathy of the second Mrs Ambrose Ferrow for the terrible end of the first woman who had borne that title.

THE MONTH: SCIENCE AND ARTS.

THE magnificent aurora of February 4 will long be remarkable, not only for its splendours and extent, but for the extraordinary magnetic perturbations which preceded and accompanied it. The Astronomer-royal has stated, that in all his experience he has never seen so great a disturbance of the magnets regularly observed at Greenwich Observatory, as took place during the display here referred to; the deflections in some instances having amounted to more than three degrees. Similar phenomena were noticed in other parts of the country, and at Manchester, attempts were made to analyse the auroral light by the spectroscope. The actual conclusions to be derived therefrom will be made known after further discussion.

A communication has been made to the Philosophical Society of Manchester on the destruction of a church by lightning, in which clear particulars are given of the metallic connections, and of the behaviour of the shock when it fell. The author states, in closing his paper, that in districts where gas-mains and water-mains and pipes are laid under ground, all buildings may be entirely protected by connecting the lightning-conductors directly with the two sets of mains. Had this been done, he says, at the church in question, it would not have suffered.

The Astronomer-royal has addressed the Astronomical Society on a question of much importance in the present advanced state of astronomical science—namely, that an observatory should be set apart for the exclusive observation of the phenomena of Jupiter's satellites. In setting forth his reasons, he says, it is well known to the students of *gravitational astronomy* that the theory of the movements of Jupiter's satellites is a very singular one, perhaps the most interesting among the planetary applications of the theory of gravitation. The results are striking; but it is especially the fourth satellite which has claims to attention, for it is by observation of that one of his moons that the mass of Jupiter himself is to be measured. Ordinary readers must take this for granted; but it is well known to astronomers that in our solar system the mass of Jupiter is next in importance to that of the sun. The work would not be dry or dull, for, as Mr Airy ventures to believe, the mere observations in their beauty, and the incessant variation of their character, would be found very interesting. Is there no well-skilled amateur who will devote himself to this task for the advantage of science? As an additional inducement we mention, that the belts of Jupiter have, within the past few weeks, exhibited magnificent effects of colour.

In certain manufacturing operations it is important to know what amount of vacuum or current may exist in a chimney or air-course; consequently, a trustworthy indicator would be appreciated. This desideratum appears to have been realised by Mr Swan's improved anemometer and pressure-gauge, which were described in a paper read before the Chemical Society of Newcastle-on-Tyne. The President of the Society stated, in his annual address, that in all furnace operations the highest results can be obtained only by a much more careful attention to the amount of atmospheric air allowed to pass into furnaces and kilns than is usually given; and as this little instrument appears to measure the amount of vacuum in a flue, or velocity of a current, with accuracy, in the hands of those properly alive to its use, and capable of interpreting its indications, important and profitable results may be obtained.

Professor Ogden Rood, of the United States, has made experiments to ascertain the amount of time necessary for vision, and finds that an object can be distinctly seen in so small a space of time as forty billionths of a second. He saw clearly, for example, the letters on a printed page, and the radiating structure of the crystalline lens of the eye; and by using a polariscope, he could see the cross and rings round the axes of crystals. It seems wonderful that the retina should be able to retain and combine a series of impressions in forty billionths of a second; but Professor Rood remarks that it is not so wonderful after all, if we accept the Undulatory Theory; for, according to that theory, in four billionths of a second, nearly two millions and a half of the mean undulations of light reach and act on the eye.

A screw-propeller fitted to a sailing-ship would turn round whenever the vessel moved forward. It has been suggested that the power thus gained might be used to give motion to an electromagnetic apparatus which would produce an electric light of great brilliancy, far more serviceable for signalling and other purposes than oil-lamps.

An ingenious inventor in Philadelphia has devised a way of blowing a jet of steam through a current of liquid slag; and thereby he produces fine threads of slag from two to three feet in length, and more or less elastic. To this material he gives the name 'mineral cotton'; and as it is found to be an admirable nonconductor for heat, it is to be manufactured in quantities, and tried as padding for pipes and steam-boilers, and in places where escape of heat is to be prevented. A specimen of this thread or fibre has been exhibited at the Manchester Philosophical Society. Although, as described, produced from slag, it has a lustrous white fibre, singularly like cotton-wool from the pod. We are informed that its cost is trifling, and that it can be used as a coating for refrigerators as well as for steam-boilers. Small quantities of similar wool, it is said, are sometimes produced while the blast is on, in the Bessemer steel-converters.

Slag accumulates in such large ugly heaps in the neighbourhood of smelting-furnaces, that we have the more satisfaction in noticing the foregoing and other profitable ways of turning it to use. Near Osnabrück, in Hanover, in imitation of shot-making, molten slag is let fall from a height of about eight feet into water, where it forms into 'large bean-shaped gravel,' which is

used in great quantities for the metalling of railways. At some of our English works, slag is now broken up by Blakes' stone-breaker, and sold for road-making; and we are told that the Bessemer slags, from the kind of iron known as hematite, make excellent concrete, because of the large quantity of lime they contain; for which reason, and for the silica which they also contain, they make excellent manure for potatoes and barley. In the fields, the broken slag crumbles to powder.

A cast-iron boiler, invented in the United States, has been brought into use in this country, and with results which shew that it has great advantages over the ordinary wrought-iron boiler. It occupies much less space, requires less fuel, and is not so liable to become foul or to explode. These are advantages worth consideration in a time when steam-engines are expected to work more and more under increased pressure. The cast-iron boiler is constructed in tubular sections, which are arched over the fireplace, and vertical elsewhere, and are connected in a way to allow of free circulation of water, and of blowing off and refilling at pleasure. If any portion should become defective, it can be taken out and replaced by a new one without disturbing the whole boiler; and in like manner, the size of the boiler can be increased by adding more sections. At a foundry in Newport (Wales), the machinery was formerly driven by a Lancashire boiler of which the fire-grate area was twenty-seven square feet. The cast-iron boiler used in its place has nearly the same heating surface as the other (the difference being twelve feet only), but its fire-grate area is not more than seventeen square feet. The Lancashire boiler consumed twenty-seven hundredweight of coal in a day, the cast-iron boiler consumed sixteen hundredweight only, yet did quite as much work as the other. This boiler was invented by J. A. Miller of Boston, U.S., and a full description of it is published in the *Proceedings* of the Institution of Mechanical Engineers, Birmingham.

We mentioned some months ago that a member of the Odontological Society had succeeded in replanting teeth which had been extracted in consequence of disease. To the process by which this was accomplished he gave the name *Reimplantation*. Another member of the same Society has now had the operation tried on himself, and with success. The tooth, which had been for some time painfully affected by changes of temperature, was carefully pulled out, to prevent straining or tearing of the gum; the dental canal was cleansed, the decayed part was scraped from the crown, and stopping applied in the usual way, and then the tooth was replaced in its socket. The operation lasted about half an hour: for three or four hours there was a dull aching pain, which, however, entirely ceased before noon of the following day, though some tenderness remained. This in turn disappeared; and by the end of a fortnight, the replanted tooth did without difficulty all the duty which a tooth is expected to do. From this it will be understood that a tooth slightly diseased at the root need not be thrown away, and that persons who object to an artificial tooth may with proper care retain the teeth which nature gave them.

Dr Craig of Washington, in making experiments on the temperature of the human body during very hot weather, came to the conclusion, that great

elevations of temperature accompany sunstroke or heat apoplexy, and he thinks it highly probable that in all such cases the heat of the body rises above 100° Fahrenheit before alarming symptoms appear.

Mr Delesse, a French savant, has described the sea-bottom along the coasts of America, in a work entitled *Lithology of the Seas of the New World*. On the eastern side, clay and sand predominate; but in going northwards, the quantity of mud increases, until, within the Arctic Circle, mud is the prevailing deposit. It is found in all the bays, straits, and channels of the polar lands; and Mr Delesse accounts for these vast accumulations by the fact, that in the north there is much paleozoic schist, which easily dissolves, that the Arctic glaciers produce mud in ceaseless abundance, and that the warm current flowing up from the south brings mud, which is readily deposited in the quiet ice-locked seas of the pole. All these effects combined produce toward the pole a constant accumulation of mud, and thereby a slow and steady formation of argillaceous strata.

Some of the agricultural and horticultural journals are again calling attention to the sunflower as a profitable article of cultivation. The *Helianthus annuus*, which is much grown in India, has an eatable kernel, equally good for food or for burning, as it contains fifteen per cent. of a mild oil; a fact which ought to be much better known than it now is among manufacturers of oil and fatteners of poultry. The number of eggs in laying hens is said to be increased by a diet of sunflower seeds. Besides this, we are informed that a portion of the leaves may be used as fodder for cows; that the stems are useful as sticks for peas and beans, and yield a fertilising ash when burned. When cultivated in the same way as Indian corn, the sunflower yields well on good soil; it will also grow in moist places, and one of the advantages attending it is that, if planted in large quantities in marshy places, it prevents or removes marsh-fever and other ill effects of malaria.

PRIMROSE AND VIOLET.

PRIMROSE and violet, down in the lane,
Trod by our footsteps so lightly of old,
I welcome you out of the earth again,
In your shaded purple and sunlit gold.

Only—if only the warm spring sun
Brought back the dead who died with the flowers!
Ye are so many, and she was but one,
Who faded for ever from earthly bowers;

Closed her blue eyes as the violets slept,
Sank with the primroses into the earth:
None could awaken her, loud though they wept;
She will not joy in the flowers' new birth.

Primrose and violet! mine still in death
Those of your kindred she gave to me here;
Granting my prayer for her youthful faith,
And she had withered before they were sore.

Yet I must live, and must live for the right—
It is for her and to see her again:
And you—ye shall be where she lies this night,
And die on her dead heart, as I would fain.

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